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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,103	11/26/2001	David Smith	018300-1193	8276

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT PAPER NUMBER

1775

DATE MAILED: 03/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/994,103

Applicant(s)

SMITH ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: .

FIRST OFFICE ACTION

Information Disclosure Statement

1. The Information Disclosure Statement received September 18, 2002 has been considered. an initialed form PTO-1449 is enclosed with this Office Action.

Claim Objections

2. Claim 3 is objected to because of the following informalities: The phrase "a refractory a bottom" (claim 3, line 2) should be corrected.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The use of "predetermined" in claim 5, line 3, is indefinite. The use of "predetermined" has been held to be indefinite in a claim where it simply means determined beforehand, *Joseph*

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E. Seagram & Sons, Inc. v. Marzall, Comr. Pats., 84 USPQ 180 (Court of Appeals, District of Columbia). Deletion of the term will overcome this rejection.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kvavle (U.S. Patent 4,901,906), Watts (U.S. Patent 3,625,277), Sylvester (U.S. Patent 3,192,581) or Lohman (U.S. Patent 3,274,681).

8. Kvavle discloses introducing molten metal into a shell of a different metal wherein a metallurgical bond is formed between the two metals (e.g. see Figures 1-14; column 4, lines 34-42; column 6, lines 3-9). Watts discloses introducing molten metal into a shell of a different metal wherein a metallurgical bond is formed between the two metals (e.g. see Figures 1-5; column 2, lines 35-63). Sylvester discloses introducing molten metal into a shell of a different metal wherein a metallurgical bond is formed between the two metals (e.g. see Figures 1-4; column 3, lines 25-72). Lohman discloses introducing molten metal into a shell of a different metal and rolling the composite billet (e.g. see Figures 1-4; column 2, lines 58-65; column 3, lines 54-58).

9. Claims 1 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto (U.S. Patent 4,537,808).

10. Yamamoto discloses introducing molten metal into a shell of a different metal wherein a metallurgical bond is formed between the two metals during repeated rolling steps and heat treatments (e.g. see column 2, lines 43-54).

11. Claims 1-2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hanmiyo (Japanese publication 60-244459).

12. Hanmiyo discloses introducing a metal core by bottom casting into a mold containing a shell of stainless steel (e.g. see Figures 3).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lohman (U.S. Patent 3,274,681) in view of Weesner (U.S. Patent 2,464,163).

15. Lohman discloses introducing molten metal into a shell of a different metal and rolling the composite billet (e.g. see Figures 1-4; column 2, lines 58-65; column 3, lines 54-58). Lohman may differ from claims 5 and 7 in that Lohman may not disclose using heating operations to facilitate his rolling operations for his carbon steel/stainless steel composite billets. Weesner, however, clearly shows that when rolling carbon steel/stainless steel composite billets it is normal practice in the art to use heating steps to facilitate the rolling operations (e.g. see column 5, lines 24-50). In view of Weesner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use heating operations to facilitate the rolling operations disclosed by Lohman because Weesner clearly teaches that heating operations are "normal practice" in such operations.

16. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (U.S. Patent 4,537,808) in view of Pearce (U.S. Patent 5,207,776).

17. Yamamoto discloses introducing molten metal into a shell of a different metal wherein a metallurgical bond is formed between the two metals during repeated rolling steps and heat treatments (e.g. see column 2, lines 43-54). Yamamoto may differ from some of the rejected claims in that Yamamoto may not specify how the molten metal is cast into the shell. Pearce, however, discloses that it is now known in industry that bottom pouring should be used when pouring molten metal into a mold because when one pour from the top of a mold, the falling molten metal causes splashes of frozen metal which causes defects (e.g. see column 3, lines 26-


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43). Pearce also discloses that when using bottom pouring, it is preferred to use a refractory funnel for directing the molten metal (e.g. column 3, lines 44-51) and it is preferred to perform all operations under vacuum to prevent contamination and air inclusion (e.g. see column 5, lines 55-60; column 6, lines 52-60). In view of Pearce, it would have been obvious to one of ordinary skill in the art to use bottom pouring and vacuum processing to cast the composite article of Yamamoto because Pearce discloses that bottom pouring is now favored by industry because it reduces defects and Pearce teaches that using vacuum processing for composite castings reduces the chance of contamination and air inclusion.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
March 6, 2003